

## EDITORIAL NOTE

### The Science of Biodiversity

Plant and animal biodiversity is a fundamental component of all ecosystems on planet Earth. Biodiversity enhances the cycling of water and nutrients, promotes the diversification of environments and habitats, recycles soils and it is the basis for the continuous evolution of all organisms in aquatic and terrestrial ecosystems. Determination of this biodiversity, its trends, and its organization in space and time is thus of prime importance for the conservation and restoration of communities and ecosystems.

Margalef's concepts of diversity, biodiversity and ecodiversity leads to the concept of functional diversity of ecosystems which processes the genetic material from the local stock of available biodiversity and this material, modified or not, is returned to the store of biodiversity.

Mooney and Mace (2009) ask why it is necessary that a robust biodiversity science/policy interface is so important.

The support to ecosystem services that benefits society – such as food, fuel, water purification, climate regulation – is one of the main process that depend on biodiversity – local, regional, continental and worldwide. These authors also state that great effort in gaining more knowledge of global and local trends in biodiversity is necessary.

Therefore the local reserve of biodiversity must be known and efforts should be developed

in order to improve this knowledge of spatial and temporal distribution, and ecosystem services.

Considering thus the Science of Biodiversity as the basis for conservation, three new initiatives are welcomed for 2009:

At the international level, the United Nations' International Year of Biodiversity.

At the Brazilian level, which encompasses large areas of the Neotropics, the revitalisation of the PELD (or LTER) programme-long term ecological research and BIOTA Brazil, both promoted by CNPq, are good news.

Thus the year 2010 will be full of activities for biodiversity scientists around the world and in Brazil: international networks, support for research and biodiversity assessments. The Brazilian Journal of Biology® will participate in all these initiatives, including in the celebration of the 70<sup>th</sup> anniversary of the continuous publication of the Journal.

*Editorial Board*

### References

- MARGALEF, R. 1977. *Our biosphere*. Ecology Institute, Oldendorf / Luhe. Germany. 179 pp.
- MOONEY, H. and MACE, G. 2009. Biodiversity Policy challenges. *Science*. vol. 325. pp. 1474.